Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2016

Reclamation District No. 0001 Union Island

| Waterway | Bank | Unit Miles | Inspection Start/End | Inspector |
|-----------------------|-------|------------|--------------------------|---------------------|
| Unit No. 01 Old River | Right | 1.14 | 10/13/2016 10/13/2016 | Maksim Khashchuk |

| LM Start | | Rating ** | М | Issue No. | D. 6 | | |
|--|--------------------------|--------------|---------|------------------------|------------|---|---|
| LM End | | Issue Type + | Ма | Location * | tion * N/A | | |
| Category | Earthen Levee | | | GPS Latitude/Longitude | | | |
| Calegory | | | Start | | End | | |
| Flood Preparedness & Training | | | | 0 | | 0 | |
| item | | | | | 0 | | 0 |
| DWR ID | DWR_RD0001_01_s _ 2013_6 | | | | | | |
| Comment Code | | | | | | | |
| | | | | | | | |
| | | Inspecto | or Comm | ent | | | |
| Inspector Comment The LMA has not attended a flood fight training class in the past few years. They do have an emergency plan. | | | | | | | |

No Photos

Issue No. LM Start Rating ** Α 8 Location * Issue Type + N/A Ма LM End Earthen Levee GPS Latitude/Longitude Category Start End Emergency Supplies & Item Equipment DWR RD0001 01 s 2013 8 DWR ID Comment Code Inspector Comment The LMA has emergency supplies on-site.

No Photos

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| Waterway | Bank | Unit Miles | Inspection Start/End | Inspector |
|-----------------------|-------|------------|--------------------------|---------------------|
| Unit No. 01 Old River | Right | 1.14 | 10/13/2016 10/13/2016 | Maksim Khashchuk |

| LM Start | | Rating ** | Α | Issue No. | | 9 | |
|-----------|--------------------------|--------------|-----------|-------------|--------|--------------|---|
| LM End | | Issue Type + | Ma | Location * | N/A | | |
| Category | Earthen Levee | | | GPS L | atitud | le/Longitude | |
| Category | | | | Start | | End | |
| Item | Operation | s & Maintena | nce | | 0 | | 0 |
| item | Manuals | | | 0 | | 0 | |
| DWR ID | DWR_RD0001_01_s _ 2013_9 | | | | | | |
| | | Comn | nent Cod | de | | | |
| | | | | | | | Т |
| | | | | | | | |
| | | Inspecto | or Comm | nent | | | |
| The LMA h | nas a copy | of the O&M N | /lanual a | vailable at | the o | office. | |
| | | | | | | | |
| | | | | | | | |

No Photos

| LM Start | 0.00 Rating ** | | М | Issue No. | | 1 | |
|--------------|---------------------------------|--------------------|----|------------------------|-----|-------------|--|
| LM End | 0.00 Issue Type + Ma Location * | | WS | | | | |
| Category | | | | GPS Latitude/Longitude | | | |
| Calegory | | | | Start | | End | |
| Item | DWR Ero | DWR Erosion Survey | | | 06° | 37.822306 | |
| item | | | | -121.3753 | 04° | -121.375304 | |
| DWR ID | | | | | | | |
| Comment Code | | | | | | | |

Inspector Comment

07/25/2016: No significant change observed. 06/25/2015: No significant change observed. 07/02/2014: No significant change observed.

08/20/2013: No significant change at this site.

08/07/2012: The erosion is at the confluence of Old River and one of its

tributary. [2016 Site ID:RD0001U01RM31.4]



Upstream view of the erosion.

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| Waterway | Bank | Unit Miles | Inspection Start/End | Inspector |
|-----------------------|-------|------------|--------------------------|---------------------|
| Unit No. 01 Old River | Right | 1.14 | 10/13/2016 10/13/2016 | Maksim Khashchuk |

| LM Start | 0.00 | Rating ** | М | Issue No. | 1 (cont) | | | |
|--|-------------|---------------|--------------|------------------------|----------------|------------|--|--|
| LM End | 0.00 | Issue Type + | Ma | Location * | WS | | | |
| Category | Suppleme | ental | | GPS Latitude/Longitude | | | | |
| Category | | | | Start | | End | | |
| Item | DWR Ero | sion Survey | | 37.8223 | 806° | 37.822306° | | |
| пеш | | | -121.375304° | | ° -121.375304° | | | |
| DWR ID | | | | | | | | |
| | | Comn | nent Cod | de | | | | |
| | | | | | | | | |
| | | | • | | | | | |
| | | Inspecto | or Comm | nent | | | | |
| 07/25/2010 | 6: No signi | ficant change | observe | ed. | | | | |
| 06/25/201 | 5: No signi | ficant change | observe | ed. | | | | |
| | | ficant change | | | | | | |
| 08/20/2013: No significant change at this site. | | | | | | | | |
| 08/07/2012: The erosion is at the confluence of Old River and one of its | | | | | | | | |

| LI | M Start | 0.00 | Rating ** | М | Issue No. | 1 (cont) |
|----|---------|------|--------------|----|------------|----------|
| L | .M End | 0.00 | Issue Type + | Ма | Location * | WS |

tributary. [2016 Site ID:RD0001U01RM31.4]



Close view of the erosion.

Photo 3 of 3: SJR2016_RD0001U01RM31.4_4.jpg



Front view of the site. Note the large tree on site.

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2016

Reclamation District No. 0001 Union Island

| Waterway | Bank | Unit Miles | Inspection Start/End | Inspector |
|-----------------------|-------|------------|--------------------------|---------------------|
| Unit No. 01 Old River | Right | 1.14 | 10/13/2016 10/13/2016 | Maksim Khashchuk |

| LM Start | 0.17 | Rating ** | N | Issue No. | 12 | | |
|----------|----------------------------------|--------------|---------|------------|------|--------------|--|
| LM End | 0.17 | Issue Type + | Ma | Location * | | WS | |
| Catagony | Category Earthen Levee | | | | | e/Longitude | |
| Calegory | | | | Start | | End | |
| Item | Trim / Thin Trees | | | 37.8213 | 76° | 37.821376° | |
| item | | | | -121.3780 | 44 ° | -121.378044° | |
| DWR ID | DWR ID DWR_RD0001_01_s _ 2014_12 | | | | | | |
| | | Comp | ant Coo | 10 | | | |

T5: Tree stumps.

Inspector Comment

Remove stump when it becomes rotted to prevent possible seepage path along the roots.



View of the tree stump on the waterside levee slope.

| LM Start | 0.24 | Rating ** | A/W | Issue No. | | 11 |
|------------------------|---------|----------------|------|------------------------|-----|--------------|
| LM End | 0.24 | Issue Type + | Ma | Location * | | CR |
| Category Earthen Levee | | | | GPS Latitude/Longitude | | |
| Calegory | | | | Start | | End |
| Encroachments | | | | 37.8203 | 62° | 37.820362° |
| Item | | | | -121.3783 | 59° | -121.378359° |
| DWR ID | DWR_RD0 | 001_01_s _ 201 | 4_11 | | | · |

Comment Code

MA: Material

Inspector Comment

Stockpiled riprap on levee crown. Keep the stockpile so that a vehicle could maneuver around the pile to facilitate visibility and access of the levee.



View of the riprap stockpiled on the levee crown.

Photo 1 of 1: FA_2016_RD0001_23_14_20160914_00010.jpg

| LM Start | 0.44 | Rating ** | U | Issue No. | | 14 | |
|----------|-----------|----------------|------|------------|--------|--------------|---|
| LM End | 0.44 | Issue Type + | Ma | Location * | LS | | |
| Category | Earthen L | evee | | GPS La | atitud | le/Longitude | |
| Calegory | | | | Start | | End | |
| Item | Animal Co | ontrol | | 37.8188 | 98° | 37.818898 | 0 |
| пеш | | | | -121.3803 | 32° | -121.380332 | 0 |
| DWR ID | DWR_RD0 | 001_01_s _ 201 | 6_14 | | | | |

Comment Code

A1: Exterminate rodents and backfill and compact or grout burrows.

Inspector Comment

Active rodent den a size of a coyote or fox.



View of the large rodent hole on the landside levee slope.

* Location

LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown

** Rating

A : Acceptable N : Not Inspected/Rated Ma : Maintenance Deficiancy

M : Minimally Acceptable CR : Corrected Ob : Design & System Obsolescence

U : Unacceptable A/W : Acceptable but Monitor & Maintain

** Rating

A : Not Inspected/Rated Ma : Maintenance Deficiancy

Ob : Design & System Obsolescence

En : Enforcement

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| Waterway | Bank | Unit Miles | Inspection Start/End | Inspector |
|-----------------------|-------|------------|--------------------------|---------------------|
| Unit No. 01 Old River | Right | 1.14 | 10/13/2016 10/13/2016 | Maksim Khashchuk |

| LM Start | 0.45 | Rating ** | U | Issue No. | | 10 |
|---|----------------|--------------|----------|------------|--------------|-------------|
| LM End | 0.45 | Issue Type + | Ма | Location * | | LS |
| Category Earthen Levee | | | | GPS L | atitud | e/Longitude |
| | | | | Start | | End |
| Item | Animal Control | | | 37.8187 | '53 ° | 37.818753° |
| пеш | | | | -121.3802 | -121.380249° | |
| DWR ID DWR_RD0001_01_s _ 2016_10 | | | | | | |
| | | Comn | nent Cod | de | | |
| A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows. | | | | | | |
| Inspector Comment | | | | | | |
| Backfill and compact levee slope with acceptable levee fill. | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |



View of the large rodent hole on the landside levee slope.

| LM Start | 0.51 | Rating ** | М | Issue No. | | 5 | | |
|------------------------|---------------------------------|--------------|------------------------|------------|--------------|------------|--|--|
| LM End | 0.51 | Issue Type + | Ma | Location * | | LS | | |
| Category Earthen Levee | | | GPS Latitude/Longitude | | | | | |
| | | | Start | | End | | | |
| Item | Slope Stability | | | 37.818003° | | 37.818003° | | |
| nem | | | -121.379845 ° | | -121.379845° | | | |
| DWR ID | DWR ID DWR_RD0001_01_f _ 2015_5 | | | | | | | |
| | Comment Code | | | | | | | |
| S1 : Repai | S1 : Repair slope instability. | | | | | | | |
| | | | | | | | | |
| | Inspector Comment | | | | | | | |

About a 1 ft. vertical cut is observed at the landside levee toe. Repair the landside levee toe per O&M standards.

Photo 1 of 1 : FA_2016_RD0001_23_5_20160914_00005.jpg



View of the vertical cut at the landside levee toe.

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2016

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| Waterway | Bank | Unit Miles | Inspection Start/End | Inspector |
|-----------------------|-------|------------|--------------------------|---------------------|
| Unit No. 01 Old River | Right | 1.14 | 10/13/2016 10/13/2016 | Maksim Khashchuk |

| LM Start | 0.52 | Rating ** | М | Issue No. | | 7 |
|---------------------------------|-----------------------|-----------------|---------------|-------------|--------------|-------------|
| LM End | 0.52 | Issue Type + | Ma | Location * | | LS |
| Earthen Levee | | | | GPS La | atitud | e/Longitude |
| Category | gory | | | | | End |
| Item | Erosion / Bank Caving | | | 37.817825° | | 37.817825° |
| item | | | -121.379811 ° | | -121.379811° | |
| DWR ID DWR_RD0001_01_s _ 2016_7 | | | | | | |
| | | Comn | nent Cod | de | | |
| E2 : Sched | dule repair | of erosion site | e prior to | the next in | spec | ction. |
| | | | | | | |
| Inspector Comment | | | | | | |
| | | | | | | |
| | | | | | | |



View of the erosion on the landside levee slope.

| LM Start | 0.67 | Rating ** | U | Issue No. | | 15 | | |
|----------------------------------|--------------|--------------|------------------------|------------|------------|--------------|--|--|
| LM End | 0.67 | Issue Type + | Ма | Location * | | LS | | |
| Earthen Levee | | | GPS Latitude/Longitude | | | | | |
| Category | | | | Start | | End | | |
| Item Animal Control | | | 37.8170 | 47° | 37.817047° | | | |
| | | | | -121.3823 | 42 ° | -121.382342° | | |
| DWR ID DWR_RD0001_01_f _ 2016_15 | | | | | | | | |
| | Comment Code | | | | | | | |

Comment Code

A1 : Exterminate rodents and backfill and compact or grout burrows.

Inspector Comment

Burrow entrence is about 18 inches by 10 inches.

Photo 1 of 1 : FA_2016_RD0001_23_15_20161017_00014.jpg



View of the large rodent burrow in the landside levee slope.

Photo 1 of 1: FA_2016_RD0001_23_4_20160914_00004.jpg

| LM Start | 0.76 | Rating ** | U | Issue No. | | 4 | |
|---------------------------------|------------------------|--------------|----|------------------------|-----|--------------|--|
| LM End | 0.76 | Issue Type + | Ma | Location * | | LS | |
| Category | Category Earthen Levee | | | GPS Latitude/Longitude | | | |
| Category | | | | Start | | End | |
| Item | Animal Control | | | 37.81588 | 1° | 37.815881° | |
| пеш | | | | -121.38270 | 4 ° | -121.382704° | |
| DWR ID DWR_RD0001_01_f _ 2015_4 | | | | | | | |

Comment Code

A1 : Exterminate rodents and backfill and compact or grout burrows.

Inspector Comment

Large burrow in the landside levee slope. Possible fox den. Cobwebs are visible in the hole. Fall 2016.



View of a large rodent hole on the landside levee slope.

| * Location | ** Rating | | + Issue Type |
|--|--|---|--|
| LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown | A : Acceptable M : Minimally Acceptable U : Unacceptable | N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain | Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En : Enforcement |

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| Waterway | Bank | Unit Miles | Inspection Start/End | Inspector |
|-----------------------|-------|------------|--------------------------|---------------------|
| Unit No. 01 Old River | Right | 1.14 | 10/13/2016 10/13/2016 | Maksim Khashchuk |

| LM Start | 1.08 | Rating ** | М | Issue No. | | 3 |
|--|-----------------|--------------|------------------------|------------|------|---------------|
| LM End | 1.08 | Issue Type + | Ma | Location * | | LS |
| Category Earthen Levee | | | GPS Latitude/Longitude | | | |
| | | | Start | | End | |
| Item | Slope Stability | | | 37.8120 | 23° | 37.812023 ° |
| пеш | | | | -121.3839 | 61 ° | -121.383961 ° |
| DWR ID DWR_RD0001_01_s _ 2016_3 | | | | | | |
| | | Comn | nent Cod | de | | |
| S3: Repair the levee slope damaged by vehicle traffic and prevent access where possible. | | | | | | |
| Inspector Comment | | | | | | |
| Repair slope damaged by vehicle by placing and compacting acceptable levee material. | | | | | | |



View of the landside slope damaged by farm equipment.